

In The Claims:

Please cancel, without prejudice, claim 16.

Please amend the remaining claims as follows:

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- 1 1. (currently amended) A disk ~~drive~~ drive comprising:
- 2 (a) a ~~disk~~ disk for storing data, the ~~disk~~ disk comprising a public ~~area~~ area for storing
- 3 plaintext data and a pristine ~~area~~ area for storing encrypted data;
- 4 (b) a ~~head~~ head for reading the encrypted data from the pristine ~~area~~ area of the ~~disk~~
- 5 disk;
- 6 (c) a control ~~system~~ system for controlling access to the pristine ~~area~~ area of the ~~disk~~
- 7 disk;
- 8 (d) authentication ~~circuitry~~ circuitry for authenticating a request received from an
- 9 external entity to access the pristine ~~area~~ area of the ~~disk~~ disk and for enabling the
- 10 control ~~system~~ system if the request is authenticated;
- a' 11 (e) a secret drive key ~~key~~ key; and
- 12 (f) decryption ~~circuitry~~ circuitry, responsive to the secret drive key ~~key~~ key, for
- 13 decrypting the encrypted data stored in the pristine ~~area~~ area of the ~~disk~~ disk to
- 14 generate decrypted data.
- 1 2. (original) The disk drive of claim 1, wherein the encrypted data comprises encrypted
- 2 authentication data.
- 1 3. (original) The disk drive of claim 2, wherein the authentication circuitry is responsive to
- 2 the decrypted data.
- 1 4. (original) The disk drive of claim 2, wherein the encrypted authentication data comprises
- 2 encrypted user authentication data.

1 5. (original) The disk drive of claim 2, wherein the encrypted authentication data comprises
2 encrypted device authentication data for authenticating a device, the device comprising a
3 unique device ID configured during manufacture of the device.

1 6. (original) The disk drive of claim 2, wherein the encrypted authentication data comprises
2 encrypted information for implementing a challenge and response verification sequence.

1 7. (original) The disk drive of claim 2, wherein the encrypted authentication data comprises
2 encrypted message authentication data.

a1 1 8. (original) The disk drive of claim 7, wherein the encrypted authentication data comprises
2 encrypted key data for generating a message authentication code.

1 9. (original) The disk drive of claim 1, wherein the encrypted data comprises encrypted key
2 data for decrypting an encrypted message.

1 10. (original) The disk drive of claim 1, wherein the encrypted data comprises encrypted
2 message data.

1 11. (original) The disk drive of claim 1, wherein the disk drive further comprises encryption
2 circuitry for encrypting plaintext data into the encrypted data stored in the pristine area.

1 12. (original) The disk drive of claim 1, wherein:
2 (a) the disk further comprises embedded servo sectors comprising servo bursts;
3 (b) the control system comprises a servo control system responsive to the embedded
4 servo sectors; and
5 (c) the authentication circuitry enables the servo control system.

1 13. (original) The disk drive of claim 12, wherein:

2 (a) the servo bursts are written to the disk in encrypted form; and

3 (b) the authentication circuitry enables the servo control system to decrypt the servo
4 bursts.

1 14. (original) The disk drive of claim 13, wherein:

2 (a) the servo bursts are written to the disk with additive noise generated from a pseudo
3 random sequence;

4 (b) the pseudo random sequence is generated from a polynomial;

5 (c) the servo control system uses the polynomial to decrypt the servo bursts; and

6 (d) the authentication circuitry provides the polynomial to the servo control system.

1 15. (original) A disk drive comprising:

2 (a) a disk for storing data, the disk comprising a public area for storing plaintext data and
3 a pristine area for storing encrypted data;

4 (b) a head for reading data from the disk;

5 (c) a control system for controlling access to the disk;

6 (d) a secret drive key;

7 (e) decryption circuitry, responsive to the secret drive key, for decrypting the encrypted
8 data stored in the pristine area of the disk to generate decrypted data; and

9 (f) authentication circuitry, responsive to the decrypted data, for authenticating a request
10 received from an external entity to access the disk and for enabling the control system
11 if the request is authenticated.

1 16. (canceled)

1 17. (original) A method of processing a request received by a disk drive from an external
2 entity to access encrypted data stored in a pristine area of a disk, the method comprising
3 the steps of:

4 (a) authenticating the request to access the pristine area and enabling access to the
5 pristine area if the request is authenticated;

6 (b) reading the encrypted data stored in the pristine area; and

7 (c) decrypting the encrypted data using a secret drive key within the disk drive to
8 generate decrypted data.

a 1 18. (original) The method as recited in claim 17, wherein the encrypted data comprises
2 encrypted authentication data.

1 19. (original) The method as recited in claim 18, wherein the step of authenticating is
2 responsive to the decrypted data.

1 20. (original) The method as recited in claim 18, wherein the encrypted authentication data
2 comprises encrypted user authentication data.

1 21. (original) The method as recited in claim 18, wherein the encrypted authentication data
2 comprises encrypted device authentication data for authenticating a device, the device
3 comprising a unique device ID configured during manufacture of the device.

1 22. (original) The method as recited in claim 18, wherein the encrypted authentication data
2 comprises encrypted information for implementing a challenge and response verification
3 sequence.

1 23. (original) The method as recited in claim 18, wherein the encrypted authentication data
2 comprises encrypted message authentication data.

1 24. (original) The method as recited in claim 23, wherein the encrypted authentication data
2 comprises encrypted key data for generating a message authentication code.

1 25. (original) The method as recited in claim 17, wherein the encrypted data comprises
2 encrypted key data for decrypting an encrypted message.

a 1 26. (original) The method as recited in claim 17, wherein the encrypted data comprises
2 encrypted message data.

1 27. (original) The method as recited in claim 17, further comprising the step of encrypting
2 plaintext data to generate the encrypted data stored in the pristine area.

1 28. (original) The method as recited in claim 17, wherein the disk further comprises
2 embedded servo sectors comprising servo bursts, the method further comprising the steps
3 of:

4 (a) servoing a head over the disk in response to the embedded servo sectors; and

5 (b) enabling servoing in the pristine area if the request is authenticated.

1 29. (currently amended) ~~The disk drive of~~ method as recited in claim 28, wherein:

2 (a) the servo bursts are written to the disk in encrypted form; and

3 (b) the step of authenticating the request to access the pristine area comprises the step of
4 decrypting the servo bursts.

1 30. (currently amended) The ~~disk drive of~~ method as recited in claim 29, wherein:

2 (a) the servo bursts are written to the disk with additive noise generated from a pseudo
3 random sequence;

4 (b) the pseudo random sequence is generated from a polynomial; and

5 (c) the step of servoing uses the polynomial to decrypt the servo bursts.

a' 1 31. (original) A method of processing a request received by a disk drive from an external
2 entity to access data stored on a disk, the disk comprising a public area for storing
3 plaintext data and a pristine area for storing encrypted data, the method comprising the
4 steps of:

5 (a) decrypting the encrypted data stored in the pristine area of the disk using a secret
6 drive key within the disk drive to generate decrypted data; and

7 (b) using the decrypted data to authenticate the request received from the external entity
8 before allowing access to the disk.
